

STN Search History

FILE 'HOME' ENTERED AT 09:02:30 ON 07 MAY 2003

- L1 QUE (SURFACTIN OR LIPOPEPTIDE (S) (BACILLUS OR SUBTILIS)) (P) (ANTI-VIRAL OR ANTIVIRAL OR VIRUS OR VIRAL OR ANTI-MICROBIAL OR ANTIMICROBIAL)
- L2 503 (SURFACTIN OR LIPOPEPTIDE (S) (BACILLUS OR SUBTILIS)) (P) (ANTI-VIRAL OR ANTIVIRAL OR VIR#### OR ANTI-MICROB#### OR ANTIMICROB#### OR ANTIBIOTIC)
- L3 9 L2 AND (SURFACTIN OR LIPOPEPTIDE OR LIPOHEPTAPEPTIDE) (S) (((REDUC#### OR LOWER) (S) (VIR## OR TITER)) OR ((KILL OR INACTIVATE) (S) VIRUS))
- L4 11 L2 AND (((REDUC#### OR LOWER) (S) (VIR## OR TITER)) OR ((KILL OR INACTIVATE) (S) VIRUS))
- L15 2391 (CYCLIC OR CIRCULAR) (S) (PEPTIDE OR LIPOPEPTIDE) (P) (ANTIVIR## OR ANTI-VIR#### OR VIR#####)
- L16 53 L15 AND (BACILLUS OR SUBTILIS OR PUMILACID#### OR SURFACT#####)

(FILE 'HOME' ENTERED AT 09:02:30 ON 07 MAY 2003)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 09:02:43 ON 07 MAY 2003

SEA (SURFACTIN OR LIPOPEPTIDE (S) (BACILLUS OR SUBTILIS)) (P) (

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- 0* FILE ADISNEWS
 - 1 FILE AGRICOLA
 - 1 FILE BIOBUSINESS
 - 0* FILE BIOCOMMERCE
 - 14 FILE BIOSIS
 - 3* FILE BIOTECHABS
 - 3* FILE BIOTECHDS
 - 10* FILE BIOTECHNO
 - 2 FILE CABA
 - 3 FILE CANCERLIT
 - 16 FILE CAPLUS
 - 2* FILE CEABA-VTB
 - 0* FILE CIN
 - 3 FILE CROPU
 - 4 FILE DDFU
 - 5 FILE DRUGU
 - 8 FILE EMBASE
 - 6* FILE ESBIODASE
 - 2* FILE FEDRIP
 - 0* FILE FOMAD
 - 0* FILE FOREGE
 - 3* FILE FROSTI
 - 2* FILE FSTA
 - 5 FILE IFIPAT
 - 4 FILE JICST-EPLUS
 - 1* FILE KOSMET
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 - 0* FILE MEDICONF

9 FILE MEDLINE
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 8* FILE PASCAL
 0* FILE PHARMAML
 1 FILE PROMT
 11 FILE SCISEARCH
 11 FILE TOXCENTER
 14 FILE USPATFULL
 5 FILE WPIDS
 5 FILE WPINDEX

L1 QUE (SURFACTIN OR LIPOPEPTIDE (S) (BACILLUS OR SUBTILIS)) (P) (

FILE 'MEDLINE, CAPLUS, BIOSIS, BIOTECHNO, EMBASE, SCISEARCH, TOXCENTER'
 ENTERED AT 09:08:13 ON 07 MAY 2003

L2 503 S (SURFACTIN OR LIPOPEPTIDE (S) (BACILLUS OR SUBTILIS)) (P) (AN
 L3 9 S L2 AND (SURFACTIN OR LIPOPEPTIDE OR LIPOHEPTAPEPTIDE) (S) (((
 L4 11 S L2 AND (((REDUC##### OR LOWER) (S) (VIR## OR TITER)) OR ((K
 L5 2 DUP REM L4 (9 DUPLICATES REMOVED)
 L6 2 DUP REM L3 (7 DUPLICATES REMOVED)
 L7 1 S L6 NOT L5
 L8 164 DUP REM L2 (339 DUPLICATES REMOVED)
 L9 76 S L8 NOT PY>1996
 L10 78 S L9 NOT L3-L5
 L11 4 S L9 AND (ANTI-VIRAL OR ANTIVIRAL OR VIR#####)
 L12 4 S L11 NOT (L3 OR L5)
 L13 1 S L9 AND (VIRAL OR VIRUS)
 L14 0 S L13 NOT L12
 L15 2391 S (CYCLIC OR CIRCULAR) (S) (PEPTIDE OR LIPOPEPTIDE) (P) (ANTIVI
 L16 53 S L15 AND (BACILLUS OR SUBTILIS OR PUMILACID#### OR SURFACT###
 L17 23 S L16 NOT L2
 L18 21 DUP REM L16 (32 DUPLICATES REMOVED)
 L19 21 DUP REM L18 (0 DUPLICATES REMOVED)
 L20 14 DUP REM L17 (9 DUPLICATES REMOVED)
 L21 7 S L19 NOT L20

L5 ANSWER 1 OF 2 MEDLINE. DUPLICATE 1
 AN 1999441998 MEDLINE
 DN 99441998 PubMed ID: 10513840
 TI **Antiviral** and hemolytic activities of **surfactin** isoforms and their methyl ester derivatives.
 AU Kracht M; Rokos H; Ozel M; Kowall M; Pauli G; Vater J
 CS Robert Koch-Institut, Retrovirologie, Nordufer 20, Berlin, Germany.
 SO JOURNAL OF ANTIBIOTICS, (1999 Jul) 52 (7) 613-9.
 Journal code: 0151115. ISSN: 0021-8820.
 CY Japan
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199910
 ED Entered STN: 20000111
 Last Updated on STN: 20000111
 Entered Medline: 19991028
 AB Inactivation of enveloped **viruses** (VSV, SFV, and SHV-1) by **surfactin** lipopeptides was dependent on the hydrophobicity, i.e. the number of carbon atoms of the fatty acid, and on the charge of the peptide moiety as well as on the **virus** species. **Surfactins** with fatty acid chains of 13 carbon atoms showed very low **antiviral** activity in comparison to C14 and C15 isoforms. C15 **surfactin** monomethyl ester also inactivated SFV which was resistant to the mixture of **surfactin** isoforms as produced by *Bacillus subtilis*. In contrast, the dimethyl ester showed no **virus**-inactivation capacity. Disintegration of **viral** structures as determined by electron microscopy after inactivation of VSV and SFV was comparable to the **titer reduction**. The effect of the **surfactin** isoforms and methyl esters on erythrocyte hemolysis correlated with the **virus**-inactivation capacity. **Surfactins** with a fatty acid chain moiety of 15 carbon atoms and one negative charge showed the highest **antiviral** activity.

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
 AN 1997:712089 CAPLUS
 DN 127:356916
 TI Mechanism of inactivation of enveloped **viruses** by the biosurfactant **surfactin** from *Bacillus subtilis*
 AU Vollenbroich, Dirk; Ozel, Muhsin; Vater, Joachim; Kamp, Roza Maria; Pauli, Georg
 CS Fachgebiet Biochemie, Molekulare Biologie, Max-Volmer-Institut Biophysikalische Chemie, Technische Universitat Berlin, Berlin, 10587, Germany
 SO Biologicals (1997), 25(3), 289-297
 CODEN: BILSEC; ISSN: 1045-1056
 PB Academic
 DT Journal
 LA English
 AB The **antiviral** activity of **surfactin**, a cyclic lipopeptide antibiotic and biosurfactant produced by *B. subtilis*, was detd. for a broad spectrum of different **viruses**, Semliki Forest **virus** (SFV), herpes simplex **virus** (HSV-1, HSV-2), suid herpes **virus** (SHV-1), vesicular stomatitis **virus** (VSV), simian immunodeficiency **virus** (SIV), feline calicivirus (FCV), and murine encephalomyocarditis **virus** (EMCV). In vitro expts. showed biphasic **virus** inactivation kinetics for enveloped

viruses during treatment. Inactivation of enveloped **viruses**, esp. herpes- and retroviruses, was much more efficient than that of non-enveloped **viruses**. For those **viruses** susceptible to its action, **surfactin** was active at 25 μ M in medium contg. 5% fetal calf serum (FCS). Concns. $\leq 80 \mu$ M of **surfactin** led to a **titer redn.** of $>4.4 \log_{10}$ CCID₅₀/mL for HSV-1 in 15 min and for SIV and VSV in 60 min. The inactivation rate increased linearly with the incubation temp. by a factor 2.4/10.degree. and logarithmically with the concn. Serum components, probably proteins and/or lipids, influence the effective **surfactin** concn. A disruption of the **viral** lipid membrane and partially of the capsid was obsd. by electron microscopy. These findings suggest that the **antiviral** action, postulated also in other investigations, seems to be due to a physicochem. interaction of the membrane-active surfactant with the **virus** lipid membrane. **Surfactin** may be useful for application in **virus** safety enhancement of biotechnol. and pharmaceutical products.

L7 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2000:9915 BIOSIS
DN PREV200000009915
TI **Antiviral** and hemolytic activities of **surfactin**
isoforms and their methyl ester derivatives.
AU Kracht, Maren; Rokos, Hartmut; Oezel, Muhsin; Kowall, Martin; Pauli, Georg
(1); Vater, Joachim
CS (1) Retrovirologie, Robert Koch-Institut, Nordufer 20, D-13353, Berlin
Germany
SO Journal of Antibiotics (Tokyo), (July, 1999) Vol. 52, No. 7, pp. 613-619.
ISSN: 0021-8820.
DT Article
LA English
SL English
AB Inactivation of enveloped **viruses** (VSV, SFV, and SHV-1) by
surfactin lipopeptides was dependent on the
hydrophobicity, i.e. the number of carbon atoms of the fatty acid, and on
the charge of the peptide moiety as well as on the **virus**
species. **Surfactins** with fatty acid chains of 13 carbon atoms
showed very low **antiviral** activity in comparison to C14 and C15
isoforms. C15 **surfactin** monomethyl ester also inactivated SFV
which was resistant to the mixture of **surfactin** isoforms as
produced by **Bacillus subtilis**. In contrast, the
dimethyl ester showed no **virus**-inactivation capacity.
Disintegration of **viral** structures as determined by electron
microscopy after inactivation of VSV and SFV was comparable to the
titer reduction. The effect of the **surfactin**
isoforms and methyl esters on erythrocyte hemolysis correlated with the
virus-inactivation capacity. **Surfactins** with a fatty
acid chain moiety of 15 carbon atoms and one negative charge showed the
highest **antiviral** activity.

L12 ANSWER 1 OF 4 MEDLINE
TI Structural and conformational studies of [Ile7] and [Leu7]surfactins from
Bacillus subtilis natto.
SO CHEMICAL AND PHARMACEUTICAL BULLETIN, (1994 Mar) 42 (3) 604-7.
Journal code: 0377775. ISSN: 0009-2363.
AU Itokawa H; Miyashita T; Morita H; Takeya K; Hirano T; Homma M; Oka K

L12 ANSWER 2 OF 4 TOXCENTER COPYRIGHT 2003 ACS
TI BIOSYNTHESIS AND METABOLISM OF CYCLOPENTANOIDS
SO Crisp Data Base National Institutes of Health.
AU PARRY R J

L12 ANSWER 3 OF 4 TOXCENTER COPYRIGHT 2003 ACS
TI BIOSYNTHESIS AND METABOLISM OF CYCLOPENTANOIDS
SO Crisp Data Base National Institutes of Health.
AU PARRY R J

L12 ANSWER 4 OF 4 TOXCENTER COPYRIGHT 2003 ACS
TI BIOSYNTHESIS AND METABOLISM OF CYCLOPENTANOIDS
SO Crisp Data Base National Institutes Of Health.
AU PARRY R J

L20 ANSWER 1 OF 14 SCISEARCH COPYRIGHT 2003 THOMSON ISI
TI Conformational mapping of the N-terminal peptide of HIV-1 gp41 in membrane environments using C-13-enhanced Fourier transform infrared spectroscopy
AU Gordon L M (Reprint); Mobley P W; Pilpa R; Sherman M A; Waring A J
SO BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES, (15 FEB 2002) Vol. 1559, No. 2, pp. 96-120.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0005-2736.

L20 ANSWER 2 OF 14 SCISEARCH COPYRIGHT 2003 THOMSON ISI
TI Gelatinase biosynthesis-activating pheromone: a peptide lactone that mediates a quorum sensing in Enterococcus faecalis
AU Nakayama J (Reprint); Cao Y; Horii T; Sakuda S; Akkermans A D L; de Vos W M; Nagasawa H
SO MOLECULAR MICROBIOLOGY, (JUL 2001) Vol. 41, No. 1, pp. 145-154.
Publisher: BLACKWELL SCIENCE LTD, P O BOX 88, OSNEY MEAD, OXFORD OX2 ONE, OXON, ENGLAND.
ISSN: 0950-382X.

L20 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2003 ACS
TI Methods and compositions for non-viral gene therapy for treatment of hyperproliferative diseases
IN Ramesh, Rajagopal; Roth, Jack A.; Saeki, Tomoyuki; Wilson, Deborah
SO PCT Int. Appl., 148 pp.
CODEN: PIXXD2

L20 ANSWER 4 OF 14 SCISEARCH COPYRIGHT 2003 THOMSON ISI
TI Some molecular and inhibitory specifications of a dipeptidyl carboxypeptidase from the polychaete Neanthes virens resembling angiotensin I converting enzyme
AU Kawamura T (Reprint); Kikuno K; Oda T; Muramatsu T
SO BIOSCIENCE BIOTECHNOLOGY AND BIOCHEMISTRY, (OCT 2000) Vol. 64, No. 10, pp. 2193-2200.
Publisher: JAPAN SOC BIOSCI BIOTECHN AGROCHEM, JAPAN ACAD SOC CTR BLDG, 2-4-6 YAYOI BUNKYO-KU, TOKYO 113, JAPAN.
ISSN: 0916-8451.

L20 ANSWER 5 OF 14 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
TI The biological activity of selected cyclic dipeptides.
AU Milne P.J.; Hunt A.L.; Rostoll K.; Van der Walt J.J.; Graz C.J.M.
SO Journal of Pharmacy and Pharmacology, (1999) 50/12 (1331-1337).
Refs: 28
ISSN: 0022-3573 CODEN: JPPMAB

L20 ANSWER 6 OF 14 MEDLINE DUPLICATE 1
TI Purification and characterization of antifungal peptide LP-1.
AU Liu Y; Xu Q; Chen Z
SO WEI SHENG WU HSUEH PAO [ACTA MICROBIOLOGICA SINICA], (1999 Oct) 39 (5) 441-7.
Journal code: 21610860R. ISSN: 0001-6209.

L20 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2003 ACS
TI Peptides, their production and use and producing microorganism
IN Krebs, Birgit; Ockhardt, Andrea; Hoeding, Birgit; Bendzko, Peter; Maximov, Jewgenij; Etzel, Winfried
SO Ger. Offen., 32 pp.
CODEN: GWXXBX

L20 ANSWER 8 OF 14 SCISEARCH COPYRIGHT 2003 THOMSON ISI

TI Minimal lipidation stabilizes protein-like molecular architecture
 AU Yu Y C; Tirrell M; Fields G B (Reprint)
 SO JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, (7 OCT 1998) Vol. 120, No. 39,
 pp. 9979-9987.
 Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
 ISSN: 0002-7863.

L20 ANSWER 9 OF 14 MEDLINE DUPLICATE 2
 TI The biological activity of selected cyclic dipeptides.
 AU Milne P J; Hunt A L; Rostoll K; Van Der Walt J J; Graz C J
 SO JOURNAL OF PHARMACY AND PHARMACOLOGY, (1998 Dec) 50 (12) 1331-7.
 Journal code: 0376363. ISSN: 0022-3573.

L20 ANSWER 10 OF 14 SCISEARCH COPYRIGHT 2003 THOMSON ISI
 TI Conformational mapping of a **viral** fusion **peptide** in
 structure-promoting solvents using **circular** dichroism and
 electrospray mass spectrometry
 AU Waring A J (Reprint); Mobley P W; Gordon L M
 SO PROTEINS-STRUCTURE FUNCTION AND GENETICS, (NOV 1998) Supp. [2], pp. 38-49.
 Publisher: WILEY-LISS, DIV JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK,
 NY 10158-0012.
 ISSN: 0887-3585.

L20 ANSWER 11 OF 14 MEDLINE
 TI Distribution of surface-exposed and non-accessible amino acid sequences
 among the two major structural domains of the S-layer protein of *Aeromonas*
salmonicida.
 AU Doig P; McCubbin W D; Kay C M; Trust T J
 SO JOURNAL OF MOLECULAR BIOLOGY, (1993 Oct 20) 233 (4) 753-65.
 Journal code: 2985088R. ISSN: 0022-2836.

L20 ANSWER 12 OF 14 SCISEARCH COPYRIGHT 2003 THOMSON ISI
 TI THE CYCLIC PEPTIDE SYNTHETASE CATALYZING HC-TOXIN PRODUCTION IN THE
 FILAMENTOUS FUNGUS *COCHLIOBOLUS-CARBONUM* IS ENCODED BY A 15.7-KILOBASE
 OPEN READING FRAME
 AU SCOTTCRAIG J S (Reprint); PANACCIONE D G; POCARD J A; WALTON J D
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, (25 DEC 1992) Vol. 267, No. 36, pp.
 26044-26049.
 ISSN: 0021-9258.

L20 ANSWER 13 OF 14 MEDLINE DUPLICATE 3
 TI Immunosuppressive effect of gramicidin S on experimental ocular neuritis
 and allergic encephalomyelitis.
 AU Matsushima S; Yoshitoshi T; Mahalak S M; Shichi H
 SO JAPANESE JOURNAL OF OPHTHALMOLOGY, (1990) 34 (3) 306-13.
 Journal code: 0044652. ISSN: 0021-5155.

L20 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2003 ACS
 TI **Circular** dichroism studies on a synthetic **peptide**
 corresponding to the membrane-spanning region of vesicular stomatitis
virus G protein and its fatty acyl derivative
 AU Joseph, Mercy; Nagaraj, Ramakrishnan
 SO Biochimica et Biophysica Acta (1987), 911(2), 231-7
 CODEN: BBACAQ; ISSN: 0006-3002

L21 ANSWER 1 OF 7 MEDLINE
TI Recent trends in the biochemistry of **surfactin**.
AU Peypoux F; Bonmatin J M; Wallach J
SO APPLIED MICROBIOLOGY AND BIOTECHNOLOGY, (1999 May) 51 (5) 553-63. Ref: 95
Journal code: 8406612. ISSN: 0175-7598.

L21 ANSWER 2 OF 7 MEDLINE
TI Mechanism of inactivation of enveloped viruses by the biosurfactant **surfactin** from **Bacillus subtilis**.
AU Vollenbroich D; Ozel M; Vater J; Kamp R M; Pauli G
SO BIOLOGICALS, (1997 Sep) 25 (3) 289-97.
Journal code: 9004494. ISSN: 1045-1056.

L21 ANSWER 3 OF 7 MEDLINE
TI Antimycoplasma properties and application in cell culture of **surfactin**, a lipopeptide antibiotic from **Bacillus subtilis**.
AU Vollenbroich D; Pauli G; Ozel M; Vater J
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (1997 Jan) 63 (1) 44-9.
Journal code: 7605801. ISSN: 0099-2240.

L21 ANSWER 4 OF 7 MEDLINE
TI Structural and conformational studies of [Ile7] and [Leu7] **surfactins** from **Bacillus subtilis** natto.
AU Itokawa H; Miyashita T; Morita H; Takeya K; Hirano T; Homma M; Oka K
SO CHEMICAL AND PHARMACEUTICAL BULLETIN, (1994 Mar) 42 (3) 604-7.
Journal code: 0377775. ISSN: 0009-2363.

L21 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI **Antiviral cyclic lipopeptides** and their use in inactivating lipid enveloped **viruses**
IN Vollenbroich, Dirk; Vater, Joachim; Pauli, Georg; Kamp, Roza Maria
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2

L21 ANSWER 6 OF 7 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Structural and functional organization of the fengycin synthetase multienzyme system from **Bacillus subtilis** b213 and A1/3.
AU Steller, Sigrid; Vollenbroich, Dirk; Leenders, Frank; Stein, Torsten; Conrad, Birgit; Hofemeister, Juergen; Jacques, Philippe; Thonart, Philippe; Vater, Joachim (1)
SO Chemistry & Biology (London), (Jan., 1999) Vol. 6, No. 1, pp. 31-41.
ISSN: 1074-5521.

L21 ANSWER 7 OF 7 TOXCENTER COPYRIGHT 2003 ACS
TI **Antiviral cyclic lipopeptides** and their use in inactivating lipid enveloped **viruses**
AU Vollenbroich, Dirk; Vater, Joachim; Pauli, Georg; Kamp, Roza Maria
SO (1998) PCT Int. Appl., 44 pp.
CODEN: PIXXD2.

WEST Search History

DATE: Wednesday, May 07, 2003

Set Name Query

side by side

Hit Count Set Name

result set

DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR

L8 L7 not l2

76 L8

L7 l4 not l6

78 L7

L6 l4 and @ad<19960812

77 L6

L5 L4 and l2

2 L5

L4 L3 and (virus or viral or anti-viral or antiviral)

155 L4

L3 (lipopeptide or lipoheptapeptide) same (antivir\$2 or antimicrobial or antibacterial or vir\$5 or anti-\$microb\$5 or anti-vir\$2)

190 L3

L2 surfactin same (antivir\$2 or antimicrobial or antibacterial or vir\$5 or anti-\$microb\$5 or anti-vir\$2)

25 L2

L1 surfactin same (antivir\$2 or antimicrobial or antibacterial or vir\$5 or anti-\$9)

25 L1

END OF SEARCH HISTORY